



Atty. Dkt. No. 039363-0703

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:

Ryan Bremer et al.

Title:

CRYSTAL STRUCTURE OF

PIM-1 KINASE

Appl. No.:

10/664,421

Filing Date:

09/16/2003

Examiner:

Nashed

Art Unit:

1656

Confirmation

3203

Number:

CERTIFICATE OF MAILING I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as First Class Mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the date below.

INFORMATION DISCLOSURE STATEMENT **UNDER 37 CFR §1.56**

Mail Stop Amendment-IDS Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Sir:

Submitted herewith on Form PTO/SB/08 is a listing of documents known to Applicants in order to comply with Applicants' duty of disclosure pursuant to 37 CFR §1.56.

A copy of each non-U.S. patent document and each non-patent document is being submitted to comply with the provisions of 37 CFR §1.97 and §1.98.

The submission of any document herewith, which is not a statutory bar, is not intended as an admission that such document constitutes prior art against the claims of the present application or that such document is considered material to patentability as defined in 37 CFR §1.56(b). Applicants do not waive any rights to take any action which would be appropriate to antedate or otherwise remove as a competent reference any document which is determined to be a prima facie art reference against the claims of the present application.

08/22/2006 WABDELR1 00000098 10664421

TIMING OF THE DISCLOSURE

The listed documents are being submitted in compliance with 37 CFR §1.97(c), before the mailing date of either a final action under 37 CFR §1.113, a notice of allowance under 37 CFR §1.311, or an action that otherwise closes prosecution in the application.

RELEVANCE OF EACH DOCUMENT

All of the documents are in English.

Applicants respectfully request that each listed document be considered by the Examiner and be made of record in the present application and that an initialed copy of Form PTO/SB/08 be returned in accordance with MPEP §609.

FEE

A credit card payment form in the amount of \$180.00 is enclosed in accordance with 37 CFR §1.17(p) to cover the fee associated with an information disclosure statement under 37 CFR §1.97(c) in the amount of \$180.00.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 50-0872. Should no proper payment be enclosed herewith, as by the credit card payment form being unsigned, providing incorrect information resulting in a rejected credit card transaction, or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 50-0872.

Respectfully submitted,

Date

FOLEY & LARDNER LLP Customer Number: 30542

Telephone:

(858) 847-6767

Facsimile:

(858) 792-6773

Richard J. Warburg Attorney for Applicant

Registration No. 32,327

MODIFIED PTO/SB/08 (08-00)

Approved for use through 10/31/2002. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Papework Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449B/PTO Complete if Known 10/664,421 INFORMATION DISCLOSURE **Application Number** STATEMENT BY APPLICANT Filing Date 09/16/2003 **First Named Inventor** Ryan Bremer **Group Art Unit** 1656 **Examiner Name** (use as many sheets as necessary) Nashed 1 of 4 Attorney Docket Number 039363-0703 Sheet

	U.S. PATENT DOCUMENTS									
Examiner Initials*	0:1-	U.S. Patent D	ocument	N	Date of Publication of	Pages, Columns, Lines, Where Relevant				
	Cite No. ¹	Number	Kind Code ² (if known)	Name of Patentee or Applicant of Cited Document	Cited Document MM-DD-YYYY	Passages or Relevant Figures Appear				
	A1	20010008765		Shinoki et al.	07/19/2001					
	A2	20010012537		Anderson et al.	08/09/2001					
	A3	20010014448		Chappa et al.	08/16/2001					
	A4	20010014449		Nerenberg et al.	08/16/2001					
	A5	20010016322		Caren et al.	08/23/2001					
	A6	20010018642		Balaban et al.	08/30/2001					
	A7	20010019827		Dawson et al.	09/06/2001					
	A8	6100254		Budde et al.	08/08/2000					
	A9	6197495		Qui et al.	03/06/2001					

	-		UNPUBLISI	HED U.S. PATENT APPLICATION	DOCUMENTS		
Examiner	Cite	U.S. Patent Application Document		Name of Patentee or Applicant of	Filing Date of	Pages, Columns, Lines, Where Relevant	
Initials*	No.1	Serial Number	Kind Code ² (if known)	Cited Document	Cited Document MM-DD-YYYY	Passages or Relevant Figures Appear	
			,				

	FOREIGN PATENT DOCUMENTS									
Examiner Initials*	Cite No.1				Name of Patentee or Applicant of Cited Documents	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶		
	A10	WO	99/26966		The Regents of the University of California	06-03-1999				
	A11	wo	01/58951		Stichting Voor de Technische Wetenschappen	08-16-2001				
	A12	WO	02/24722		Prochon Biotech Ltd.	03-28-2002		-		

NON PATENT LITERATURE DOCUMENTS								
Examiner Initials*	Cité No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ⁶					

Examiner	Date	
Signature	Considered	

^{*}EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

AUG 2 1 2006

¹ Unique citation designation number. ²See attached Kinds of U.S. Patent Documents. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶Applicant is to place a check mark here if English language Translation is attached.

Approved for use through 10/31/2002. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control

	Substitute for form	1449B/	PTO	Complete if Known			
	INFORMATION D	ISCLO	SURE	Application Number	10/664,421		
	STATEMENT BY	APPLI	CANT	Filing Date	09/16/2003		
				First Named Inventor	Ryan Bremer		
				Group Art Unit	1656		
(use as many sheets as necessary)				Examiner Name	Nashed		
Sheet	2	of	4	Attorney Docket Number	039363-0703		

		NON PATENT LITERATURE DOCUMENTS	
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ⁶
	A13	BOEHM, et al., "Novel Inhibitors of DNA Gyrase: 3D Structure Based Biased Needle Screening, Hit Validation by Biophysical Methods, and 3D Guided Optimization. A Promising Alternative to Random Screening," J. Med. Chem. 43:2664-2674 (2000)	
	A14	BOHACEK, et al., "Multiple Highly Diverse Structures Complementary to Enzyme Binding Sites: Results of Extensive Application of a de Novo Design Method Incorporating Combinatorial Growth," J. Am. Chem. Soc. 116:5560-5571 (1994)	
	A15	CHONG, et al., "Molecular dynamics and free-energy calculations applied to affinity maturation in antibody 48G7," PNAS 96:14330-14335 (1999)	
	A16	CORNELL, et al., "A Second Generation Force Field for the Simulation of Proteins, Nucleic Acids, and Organic Molecules," J. Am. Chem. Soc. 117:5179-5197 (1995)	
	A17	DONINI and KOLLMAN, "Calculation and Prediction of Binding Free Energies for the Matrix Metalloproteinases," <i>J. Med. Chem.</i> 43:4180-4188 (2000)	
	A18	DOWNS and WILLETT, "Similarity Searching and Clustering of Chemical-Structure Databases Using Molecular Property Data," <i>J. Chem. Inf. Comput. Sci.</i> 34:1094-1102 (1994)	
	A19	ELCOCK, Realistic modeling of the denatured states of proteins allows accurate calculations of the pH dependence of protein stability. J. Mol. Biol., 294:1051-1062, (1999).	
	A20	FELDER, "The Challenge of Preparing and Testing Combinatorial Compound Libraries in the Fast Lane, at the Front End of Drug Development," <i>Chimia</i> 48:531-541 (1994)	
	A21	GILLILAND and LADNER, Crystallization of biological macromolecules for X-ray diffraction studies. Current Opinion in Structural Biology, 6:595-603, (1996).	
	A22	JARVIS and PATRICK, "Clustering Using a Similarity Measure Based on Shared Near Neighbors," IEEE Transactions on Computers 11:1025-1034 (1973)	
	A23	KE and DOUDNA, Crystallization of RNA and RNA-protein complexes. Methods, 34:408-414, (2004).	
	A24	MASSOVA and KOLLMAN, "Computational Alanine Scanning to Probe Protein – Protein Interactions: A Novel Approach to Evaluate Binding Free Energies," <i>Journ. of Amer. Chem. Soc.</i> 121(36):8133-8143 (1999)	

		-
Examiner	Date	
Signature	Considered	

^{*}EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ²See attached Kinds of U.S. Patent Documents. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control

	Substitute for for	rm 1449B/	PTO	Complete if Known			
	INFORMATION	DISCLO	SURE	Application Number	10/664,421		
	STATEMENT B	Y APPLI	CANT	Filing Date	09/16/2003		
				First Named Inventor	Ryan Bremer		
				Group Art Unit	1656		
	(use as many shee	ets as ne	cessary)	Examiner Name	Nashed		
Sheet	3	of	4	Attorney Docket Number	039363-0703		

		NON PATENT LITERATURE DOCUMENTS	
Examiner Initials*	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ⁶
	A25	MCGOVERN, et al., "A Common Mechanism Underlying Promiscuous Inhibitors from Virtual and High-Throughput Screening," J. Med. Chem. 45:1712-1722 (2002)	
	A26	OBRECHT, et al., "Solid-Supported Combinatorial and Parallel Synthesis of Small-Molecular-Weight Compound Libraries," Linker Mol. & Cleav. Strat. P. 85.	
	A27	OWEN, et al., "Two Structures of the catalytic domain of phosphorylase kinase: an active protein kinase complexed with substrate analogue and product," Curr. Biol. Ltd. 3:467-482 (1995)	
	A28	PEARLMAN and CHARIFSON, "Are Free Energy Calculations Useful in Practice? A Comparison with Rapid Scoring Functions for the p38 MAP Kinase Protein System," <i>J. Med. Chem.</i> 44:3417-3423 (2001)	
	A29	RIPKA, et al., "Aspartic Protease Inhibitors Designed from Computer-Generated Templates Bind as Predicted," Org. Lett. 15:2309-2312 (2001)	
	A30	WIENCEK, New strategies for protein crystallization growth. Ann.Rev.Biomed.Eng., 1:505-534, (1999).	
, . ·	A31	WILLETT, "Chemical Similarity Searching," J. Chem. Inf. Comput. Sci. 38:983-996 (1998)	

	,		
Examiner		Date	
Signature		Considered	

^{*}EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

¹ Unique citation designation number. ²See attached Kinds of U.S. Patent Documents. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁴Applicant is to place a check mark here if English language Translation is attached.

MODIFIED PTO/SB/08 (08-00)

Approved for use through 10/31/2002. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control

	Substitute for form	1449B/	PTO	Complete if Known			
	INFORMATION DI	SCLO	SURE	Application Number	10/664,421		
	STATEMENT BY	APPLI	CANT	Filing Date	09/16/2003		
				First Named Inventor	Ryan Bremer		
				Group Art Unit	1656		
	(use as many sheets	as ne	cessary)	Examiner Name	Nashed		
Sheet	4	of	4	Attorney Docket Number	039363-0703		

NON PATENT LITERATURE DOCUMENTS					
Examiner Initials*	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ⁶		
	A32	YANG et al., Peptide analogs from E-cadherin with different calcium-binding affinities. J. Peptide Research, 55:203-215, (2000).			

Examiner Date	
Signature Considered	

^{*}EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ²See attached Kinds of U.S. Patent Documents. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶Applicant is to place a check mark here if English language

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

This Page is Inserted by IFW Indexing and Scanning Operations and is not part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

☑ BLACK BORDERS		
☐ IMAGE CUT OFF AT TOP, BOTTOM OR SIDES		,
☐ FADED TEXT OR DRAWING		
☐ BLURRED OR ILLEGIBLE TEXT OR DRAWING		•
☐ SKEWED/SLANTED IMAGES		,
☐ COLOR OR BLACK AND WHITE PHOTOGRAPHS		•
☐ GRAY SCALE DOCUMENTS		٠
☐ LINES OR MARKS ON ORIGINAL DOCUMENT	i de la companya de l	
☐ REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POO	R QUALITY	
□ OTHER:		

IMAGES ARE BEST AVAILABLE COPY.

As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.